

QUESTIONS AND ANSWERS

VistA–Office EHR (www.vista-office.org)

Updated 09/19/2005

1. What is VistA-Office EHR (VOE)?

The Centers for Medicare & Medicaid Services (CMS), an agency of the U.S. Department of Health and Human Services, and the Veterans Health Administration (VHA) of the Department of Veterans Affairs have collaborated to configure VistA, the VHA's Electronic Healthcare Record (EHR) technology, to the private physician office setting. VOE includes existing VistA functions of order entry, documentation, results reporting, etc. and had been enhanced in the areas of physician-office patient-registration; interface possibility to the existing billing systems; and reporting of quality measures.

The software is being released as a beta version 1.0 for further testing and development. The beta testing will be conducted with qualified vendors and selected beta test sites (5-10).

The continued testing and development is complementary to the beginning of the 8th round of Quality Improvement Organization (QIO) contracts. As part of CMS' ongoing efforts to improve quality of care, CMS commenced its 8th round of three year contracts with 53 local Quality Improvement Organizations (QIOs) on August 1, 2005. This work marks a significant change in the program's direction in that it focuses substantially more on supporting effective use of electronic health information to improve the care of all patients.

As part of their new work, QIOs will be working with up to five percent of primary care physician offices in each state. Each will be providing assistance to these practices with workflow assessments, identification of functions and features of electronic health records that best match their needs, and optimizing use of electronic information to care for their patients. In addition, the QIOs will be supporting the practices to better manage their populations with acute and chronic conditions through better patient/provider partnering, team based care, and careplan design.

2. How does VOE fit into the HHS HIT strategy?

The Secretary has made a goal of achieving widespread interoperability as the health care system adopts EHRs. A key part of the HHS strategy is developing a certification process that ensures a minimum set of functionality, interoperability (ability for software and systems to work together) and privacy and security of health information. The Secretary issued a request for proposal in June 2005 for a contractor to develop a commercially viable certification process which will be considered by the new American Health Information Community as it makes recommendations to the Secretary on ways to achieve adoption of interoperable HIT. As the certification criteria and process for EHRs is considered and recognized by the Secretary, VOE beta version 1.0 will be tested in a small number of physician offices and updated by contractors and qualified vendors to ensure that a certified version is developed.

3. Does CMS intend to require physicians to use the system?

No. Physicians are free to choose any EHR that meets their needs. Some physicians may wish to consider participating in the beta test and become involved early in the shaping of the VOE. Physicians may be interested in using this comprehensive EHR system that has demonstrated improvements in the quality of patient care in the VHA. CMS is also investigating programs to provide incentives for physicians that use this or any other EHR system that provides similar functionality.

4. How can vendors use the system?

We expect that VOE will provide new opportunities to vendors. It is an open, standards based foundation that vendors can use as a focal point for developing value-added enhancements, like installation, training and support.

5. Why did CMS select VistA?

A goal of this project is to provide a comprehensive EHR that meets CMS' quality reporting specifications. CMS has chosen to use the VistA hospital information system developed by the Department of Veterans Affairs as the core of VOE. VistA was chosen because it is in the public domain and is a software package that is flexible and robust. The system is used in 1,300 diverse sites of care and services 5 million veterans annually. Most importantly, however, over the 20 years that VistA has been in use, VHA developed the Computerized Patient Record System (CPRS), clinician interface, into a well-defined and documented clinical data repository with a powerful, physician-oriented toolset.

6. Is VistA-Office EHR open source?

No. Technically, open source means the application is not dependent on proprietary software. VOE was developed to operate on a windows platform with cache as the underlying database program. Other licenses for certain code sets, such as Current Procedural Terminology (CPT®), are also required. There is no copyright on the software for VOE since it will be in the public domain. A software vendor may modify certain parts of the core VistA or VOE software. However, the modified version may not be compatible with VistA or VOE and cannot be called VOE once it deviates from the official release version.

7. What are the limitations with MUMPS if any?

M (MUMPS) is a programming language with strong emphasis on text handling and database management but by itself is not a database management system (in the same sense that Java, C or C++ are not DBMSs). Additional coding in M can be done to add SQL or OBDMS capabilities. Some perceive M as lacking in control and structure as it imposes very few controls or limitations over what can be done. It leaves the discipline to the programmer. The primary limitation of a programming language is that it takes more expertise to apply the language to create a working database. The advantage on the other hand is that is more flexible.

8. Will VA and CMS move to different software programming?

The VA under its HealthVet-Vista program is looking to take advantage of new developments in technology that will support a seamless data sharing among providers within the federal and private sector. CMS intends to maintain partnership with the VA to stay in sync with their ongoing Vista enhancements.

9. Will the VOE be certified software?

CMS intends, through its contractors, to pursue EHR certification once standards are published by the Secretary of Department of Health and Human Services.

10. What benefits will physician offices gain from using VOE?

VOE, or any EHR for that matter, should offer quality benefits such as:

- Improved office workflow
- Improved access to clinical records
- Checking for drug-drug interactions
- Improved clinical decision support

These systems are also crucial for improving communications between the provider and the patient, as well as for participation in quality improvement programs including pay for performance initiatives. Finally, these systems will form the cornerstone for the implementation of a national healthcare information infrastructure.

11. Does the use of EHR technology create more work for physician offices?

Initially, as the office goes through a learning curve and their workflow changes, they will find that it takes longer to do some things than it did before. However, over time, they will learn how to take advantage of their new system to work more efficiently. With appropriate utilization, EHRs can result in significant improvements in many areas and a positive return on investment.

12. How do patients benefit when their physicians use EHR technology?

All the quality benefits mentioned above directly impact the quality of care.

13. What is the connection between VOE and DOQ-IT?

The Doctor's Office Quality - Information Technology (DOQ-IT) project seeks to increase the use of health information technology in the physician office setting by consulting on workflow options, business case scenarios, Electronic Health Record features and functionalities and optimal use of whichever EHR system is installed. DOQ-IT also seeks to improve the quality of patient care for chronic diseases by demonstrating improvement on a defined set of clinical measures. Both VOE and DOQ-IT are programs sponsored by CMS. VOE will be fully compliant with DOQ-IT measure specifications, including the technology needed to report quality measure data to Quality Improvement Organizations. Currently, other vendors of EHR systems have also agreed to participate in the DOQ-IT project. See www.doqit.org for additional information.

14. Why should I choose VOE over other systems?

The choice of an EHR should be based on which product provides the functions that best fit your office workflow. While CMS and VHA encourage the use of high quality,

affordable private vendor software; the VOE software is one option that may be considered.

15. If I already have another system in place, should I switch to VOE?

If your current system meets your needs and provides a level of features/functions comparable to VOE, there should be no need to change. CMS and VHA encourage the use of high quality, affordable private vendor software. VOE provides another option when appropriate.

16. What is the operating system for VOE?

VOE has been developed to work with the Windows operating system.

17. Does VOE require a special database?

Yes, it will require the Cache database from InterSystems and will require a license to run that database.

18. If I have Access or another database will the VOE run on them?

No, VOE combines the database and the programming language into one system that cannot be separated.

19. How do I obtain Cache?

Cache is a trademark of InterSystems www.intersystems.com . It may be provided in conjunction with the VOE installation discs. You may also get a copy from InterSystems Corporation.

20. Is there any cost to obtaining Cache?

At this time the cost of obtaining Cache from InterSystems for the first year is approximately \$2,740 that includes up to seven users, Cache software support for one year, and updates. The second and subsequent year costs would be for support and update changes only. (License fees are one time only unless the number of users changes).

For example:

You are an office with two doctors, two nurses, two receptionists and a billing clerk and will place the software on one server. The fees will be:

Licenses	\$1600.00	Licenses	\$0.00
Support	\$900.00	Support	\$900.00
Updates	\$240.00	Updates	\$240.00

Total for 1st year \$2740

Total for 2nd year \$1140.00

These figures are estimates only and provided at the time of release of beta version 1.0 to help with planning purposes only. Actual figures may vary. Consult with InterSystems or your value added resource dealer for exact costs.

21. What if I have more than seven users?

Configuration and installation of systems larger than seven users requires a larger database license and also could be more complex in terms of installation. Please contact VOE vendor or InterSystems.

22. Why must I have Cache to run VOE?

Cache works as an electronic File Cabinet of many folders in patient record.

For Example: A progress note is written on a piece of paper (so a record of the visit can be kept), that paper is put in a patient's file (so it can be viewed in context with the entire record), that record is put in a file cabinet (so it can be easily found and retrieved), that file cabinet is put in a file room or area (so all the records are in one safe place). A database, in this case Cache, does exactly that in an electronic manner. The database performs the functions of paper, file, file cabinet and record room all in one.

VOE needs a database for storing/retrieving/manipulating the data in the patient record. Cache is the database we are using. We chose Cache over other databases because it already works with VOE, so we didn't have to change anything, and it runs on Windows - which is what will be found in the vast majority of office computers.

23. How do I obtain a copy of the Software?

The software will be available for beta testing through qualified vendors. Please visit www.vista-office.org for further information.

24. How will information be distributed as details become available?

Information will be posted to the CMS website at <http://www.cms.gov/quality/pfqi.asp> and also on the VOE web site at www.vista-office.org

25. Will CMS provide additional technical services or support for users of the software?

CMS intends to work with the VistA community and contractors to implement a tiered assistance program. CMS will work with vendors and selected test sites during the best test to facilitate vendors testing and further development of the software to meet small office needs. CMS, through the Iowa Foundation for Medical Care (www.ifmc.org) as its contractor to support the VOE project, has contracted WorldVistA; www.worldvista.org as the VOE vendor support organization to provide vendor training and support on VOE (www.vista-office.org). WorldVistA's mission is to improve healthcare by making medical software better and more affordable. WorldVistA, incorporated in 2002 as a nonprofit corporation, will guide beta testing in collaboration with qualified vendors and interested test sites.

26. How can I get more information about the features and functions of VOE?

The features and functions of VOE are posted at www.vista-office.org

27. Does the VOE contain functionality for HIPAA compliance?

Yes. The core VistA product contains role-based access for security controls, electronic signature required for approval of orders, and audit capability.

28. Will there be future releases and product development?

CMS intends to support a model that includes future updates to the software.

29. Will I be able to integrate my billing package to VOE?

In beta version 1.0, there will be an inbound interface for the Medical Manager practice management system to send patient registration information to the electronic health record. VOE has a patient summary encounter form that can be used to generate information for billing. (No outbound interface with the Medical Manager)

30. Is the software free?

No. The certified software, after beta testing is complete late in 2006, will be available for a small charge associated with reproducing and mailing the software. In addition, there is a fee associated with licensing the use of the database program (Cache) property of and licensed by InterSystems and for use of proprietary code sets such as CPT® codes, licensed by the American Medical Association (AMA).

30. If I already have a practice management system and have the CPT® Codes license, will I need to get another license from the AMA?

Yes. The CPT codes must be specially formatted to work in the VistA Office software. Even if you have other products that use CPT codes, that license would not cover use of CPT in VOE because CPT licenses are by product. For more information on CPT licenses contact the AMA at 312-464-5022 or see the AMA website: www.ama-assn.org/go/cpt.

31. How will I get any updates to the CPT® Codes that AMA releases from time to time?

As AMA updates the current CPT®, CMS, in agreement with the AMA, will update the downloadable CPT® patch to work with the VOE and provide to the AMA along with instructions in download procedures.

32. What does the software cost to implement?

The cost varies dependent upon your needs. Training materials and technical support materials will be freely available. You may choose to hire a vendor to provide training and/or technical support. CMS is supporting a VOE vendor support organization (World VistA: worldvista.org) to conduct beta testing in collaboration with the vendor community and interested physician offices.

33. How is the software installed?

There is a step-by-step set of installation instructions included with the software.

34. What type of hardware and software would I need to run VOE?

- a. The following minimum requirements represent a simple, basic set-up for a small physician practice.
- b. A more robust set-up may be required if interfaces are added, the number of users is increased or other factors that could effect performance are changed.
- c. For small, simple installations, the server and workstation can be one and the same.

- d. A desktop system can perform as a server for small practices.
- e. Practices with more than a few users should consult a vendor.

Server Hardware/Platform Requirements

- Minimum processor speed is 1.4 gigahertz
- Minimum memory requirement is 512 megabytes
- Minimum hard drive space is 60 gigabytes
- Compact Disk (CD) drive
- Network capability (if more than one computer is used)
- Windows compatible printer

Server Operating System Requirements:

- Microsoft Windows 2000 or higher

Server Database:

- Cache 5.0 or higher

Workstation Hardware requirements

- Minimum processor speed is 1 gigahertz
- Minimum memory is 256 megabytes
- Minimum hard drive space is 10 gigabytes
- Network Capability

Workstation Operating System Requirements

- Microsoft Windows 2000 or higher

Recommended Server and Workstation Add-ons:

- Antivirus software (e.g. McAfee or Norton)
- Internet connectivity (28.8 K modem or better)
- Internet security software (e.g. McAfee or Norton)
- Internet provider
- MS Internet Explorer 5.5 or newer
- Backup mechanism (e.g. CD-R/W drive)
- Un-interruptible Power Supply
- Static IP address

35. Can I get a demonstration of VOE?

The VOE demonstration is available at www.vista-office.org.

36. Will VOE work in a 350 bed hospital?

The VistA Office EHR is targeted for use in a small physician office. For hospital settings, contact the Veteran's Administration to obtain the FOIA version of the VistA software that is in use in the VHA today.

37. Does VOE contain ePrescribing functionality?

VOE contains medication ordering and printing functions. Following the ordering of the medication, the VOE includes the ability to fill, fax or print the order. New functionality with regard to medication orders include:

1. The ability to place medication orders
2. The ability to fill medication orders from stocks of sample medications
3. The ability to print prescriptions for signature for patient to take to a pharmacy
4. The ability to fax prescriptions to a pharmacy with an electronic signature
5. Full auditing of all medication orders within the medication profile

There is a capability for the prescriptions to be sent electronically to pharmacies that the physician uses regularly, however this is a function that would require some additional work by a vendor. The pharmacy would need to provide the physician's office with their URL address for that feature to be activated. The physician's office would also need to access a system through which encryption would be provided to maintain a secure transmission of the data. Using the API (data and messaging standards included) a vendor could complete development of an interface where VOE is configured to work with pharmacies with SureScript standards. Many pharmacies use this standard or one very similar and completing a pharmacy interface would be fairly quick to complete.

38. Will there be multiple insurance formularies for ordering medications?

VOE does not include formularies. There is a standard orderable file available that includes the medications tracked by the DOQ-IT measures and the 100 most frequently ordered medications from 2004 based upon lists available on RXList.com. Sites adopting VOE can request assistance with orderable item list configuration from VOE vendors. Formularies specific to some insurance companies may be found on the Internet and may be accessed via web browser.

39. How are updates for new medications handled?

CMS plans to provide quarterly software updates which will include new medications. In addition, the users could add the medications to the medication database.

40. Does the system provide drug-to-drug interaction checking?

Yes. There is a drug-to-drug interaction warning built into the system. The VOE includes activated pharmacy orderable items applicable to specific medications encompassing the DOQ-IT measures. Sites adopting the VOE are responsible for finalizing the orderable items list with desired medications. The VistA FOIA National Drug File (NDF) is included in the VOE. The NDF package provides standardization of the VOE files. Standardization includes the adoption of new drug nomenclature and drug classification, as well as linking the local drug file entries to data in the National Drug files. For drugs approved by the Food and Drug Administration (FDA), NDF provides for the ability to access information concerning dosage form, strength and unit, package size and type, manufacturer's trade name, and National Drug Code (NDC) information. The NDF software also lays the foundation for sharing prescription information. Proprietary medication instructions in English and Spanish are available but separately licensed from First Data Bank. All active medications and decision support is available in the NDF that allows for full auditing of all medications orders within the medication profile.

41. How are quality measures included?

VOE offers automated disease management functionality based upon the DOQ-IT measures. The VOE recognizes patients that meet the DOQ-IT qualifications by posting a registration reminder for the physician. The physician can then choose to satisfy the reminder and enter the patient into DOQ-IT registry. Once the patient is entered into the registry, additional reminders will prompt the physician to take any action necessary to maintain the patient's registry status. These additional prompts may include:

1. Medication Orders reminders
2. Laboratory Orders reminders
3. Patient Counseling reminders
4. Any other actions necessary to maintain registry eligibility

VOE will also have a fully functional interface designed to the QIO Clinical Warehouse specifications. Appropriate patient profiles will be transmitted according to DOQ-IT requirements. All sites wishing to participate in the DOQ-IT program must contact their local QIO and enroll their practice. Once enrolled, participating practices will have the appropriate accounts established; they will have the authority to submit patient level DOQ-IT data via Quality Net Exchange (www.qnetexchange.org). Brief directions will be included in the VOE documentation to point the practice to the appropriate resources for participation. Detailed instructions for preparing files for transfer will be provided.

42. Do I have to register my patients into DOQ-IT to get the clinical reminders?

Participation in DOQ-IT and use of the VOE DOQ-IT functionality are separate issues. Practices can use the full set of DOQ-IT related clinical reminders without participating in the DOQ-IT program. To get the clinical reminders, you will need to register patients in VOE using instructions provided. For practices that may wish to have the DOQ-IT reminders enabled as the default (and then choose to turn off the ones that are not relevant), an office workflow may be initiated to register all new patients in the DOQ-IT disease management groups. After seeing a patient, the physician may wish to have some reminders disabled. This can be accomplished by un-registering patients from a select group of DOQ-IT measures after the visit is finished. This will allow the physician to see the DOQ-IT reminders during the first visit and initiate treatment as soon as possible. This may be particularly advantageous for patients who may not visit the office regularly. Participation in the DOQ-IT program with the local QIO is highly encouraged, but voluntary. If the practice chooses to participate in submission of data to the QIO clinical warehouse, registration is a process initiated through their state's QIO.

43. Will the vendors who have had the training from the VOE Vendor Support Organization (VVS/O) be "certified"?

WorldVistA will post a list of vendors qualified to support VOE installation. WorldVistA will offer training and support for vendors.

44. How does the system support patient care?

The VHA is a recognized leader in EHR Technology. The VistA system, the core of VOE, is in use by 158 geographically separated VA Hospitals and clinics that have collaborative relationships with 110 of the nation's 117 medical schools. The VistA system is used by more than 1,300 VA facilities to maintain the records of over 5 million veterans. The VHA employs 14,200 physicians, 36,000 registered nurses, and 4,700 pharmacists. Currently, the VistA system is in use outside of the VHA by the Washington, DC Department of Health; American Samoa; and forms the core system for the Indian Health Services (RPMS) system. Patient care benefits have been well documented.

Links to Key Articles on VistA

- [VistA - U.S. Department of Veterans Affairs National Scale Healthcare Information Systems \(HIS\)](#), International Journal of Medical Informatics, February, 2003.
- [The Veterans Health Administration: Quality, Value, Accountability, and Information as Transforming Strategies for Patient-Centered Care](#), The American Journal of Managed Care, November, 2004.
- [Comparison of Quality of Care for Patients in the Veterans Health Administration and Patients in a National Sample](#), Annals of Internal Medicine, December, 2004.
- [The Best Care Anywhere](#), Washington Monthly, January/February, 2005.